



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,858	03/30/2001	David W. Cannell	05725.0844-00	3869
22852 7590 08/22/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER FUBARA, BLESSING M	
			ART UNIT 1618	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/820,858
Filing Date: March 30, 2001
Appellant(s): CANNELL ET AL.

MAILED
AUG 22 2007
GROUP 1600

Jessica Roark
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/27/07 appealing from the Office action mailed 11/28/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because claim 1, which appellant identifies as the only independent claim is directed to a composition comprising a) at least one compound that has two quaternary ammonium groups, b) at least one compound comprising at least one C5 to C7 saccharide unit that is substituted with at least one amino group; where a) and b) are present in an amount effective to durably condition said at least one keratinous fiber, with the proviso that when b) is chosen from polysaccharide, then the amino groups are unsubstituted.

Art Unit: 1618

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because the examiner has withdrawn them.

The rejection of claims 16, 18, 19 and 48 under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn.

The rejection of claims 1-9, 13-20, 37-40, 43, 44, 47 and 48 on the ground of nonstatutory obviousness-type double patenting over claims 1-11, 13-19, 26, 31-36, 38, 39, 42 and 43 of US 6,485,105 is withdrawn in view of the filing of a terminal disclaimer on 4/27/07.

(7) Claims Appendix

A substantially correct copy of appealed claims appears on page iv of the Appendix to the appellant's brief. The minor errors are as follows: claims 10-12 are withdrawn and not claims 10-13.

(8) Evidence Relied Upon

5,494,533	WOODIN, JR. et al.	2-1996
4,913,743	BRODE et al.	4-1990
4,743,442	RAAF et al.	5-1988

Art Unit: 1618

(9) Grounds of Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-8, 13-16, 20, 24-26, 29, 35 and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Woodin, Jr. et al. (US 5,494,533).

Woodin, Jr. discloses compositions and method of using said composition in personal cleansing (abstract). Exemplary compositions II-IV contain hydroxyethyl cellulose, polyquaternium and laurdimonium hydroxyethylcellulose, and other components. The polyquaternium and laurdimonium hydroxyethylcellulose are quaternary ammonium containing compounds that meet the limitation of claim 1 (a) and 2-8; while both the polyquaternium and the laurdimonium hydroxyethylcellulose meet the limitations claims 1 (a) and 2-8, the laurdimonium hydroxyethylcellulose meets the limitation of an amino polysaccharide in which the amino group is not substituted. Example III specifically has polyquaternium 24. Woodin also discloses that copolymers of saccharides and compatible synthetic monomers are employed in the cleansing composition, which meets the limitation of a compound comprising at least one C₅-C₇ saccharide units substituted with at least one amino group; the saccharides that are encompassed by the copolymers of saccharides and compatible synthetic monomers (compound)

Art Unit: 1618

are glucose, galactose, mannose, arabinose, xylose, fucose, fructose, glucosamine, galactosamine and glucuronic acid (column 4, lines 44, 45 and 53-61). Polyquaternium 24 is present in an amount of 1.45% w/w in Example III and thus meets the limitation of claims 14 and 15. The laurdimonium hydroxyethylcellulose and glucosamine, which contain aldo-hexose amine sugars meet the limitations of claims 24-26. The composition of Woodin is packaged in container that would administer foamed compositions for topical applications (column 5, line 63 to column 7 line 26) and the composition is also formulated as foaming gels, foaming lotions and foaming scrubs and meets the limitations of claim 45. Woodin's compositions further comprise optional ingredients namely, conventional antibacterial agents, perfumes, dyes, preservatives, pigments, skin or hair moisturizers (column 7, line 35 to column 8 line 7); when the composition is formulated as a pharmaceutical, the composition would optionally contain pharmaceutically active agents such as analgesic, antibiotics and etc (column 8, lines 25-37). Regarding claim 29, it is noted that applicants' specification at page 7, line 20 defines the term "polymers" to include oligosaccharides. Therefore, Woodin meets the limitations of the designated claims.

Claims 1-9, 13, 16, 17, 20, 24-26, 29, 35, 39, 40 and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Brode et al. (US 4,913,743).

Brode discloses compositions comprising glycosaminoglycans and "certain cationic polymers" and the compositions are used in personal care or medical applications (abstract; column 2, line 45-52); Brode specifically discloses using the composition in kericare, which Brode "describes the treatment or care of keratinous material, such as hair, skin, nails or other like material, and encompasses both medical and personal care applications" (column 11, lines 22-27). According to Brode, glycosaminoglycans are polysaccharides containing disaccharide

Art Unit: 1618

repeating units of hexosamine and hexose or hexuronic acid, the glycosaminoglycans may also contain sulfate groups (column 3, lines 20-23). The cationic polymers may be polysaccharide such as polyquaternium 4, polyquaternium 10 and polyquaternium 24 (claim 10), polyalkylenimine, poly(meth)acrylamides, polyvinyl pyrrolidones, poly (meth)acrylates, diallyl dialkyl ammonium halides and condensation polymer (column 4, lines 16-64). The glycosaminoglycans are the compounds of the claimed invention that comprises at least one C₅-C₇ saccharide unit substituted with at least one amino group. The polyquaternium meets the limitation of the claimed compound comprising at least two quaternary ammonium groups. Run 40.1 to 40.9 contain 2.0-2.5 wt% and 0.1 wt% glycosaminoglycans (Table 1 in column 23). The personal care composition is in the form of skin cream, bath oils, gels and etc (column 11, line 33 to column 12 line 10). Brode's composition further contains surfactants (column 12, lines 37-53), cleansers (column 12, lines 54-56), colorants, preservatives and moisturizers (column 12, lines 56-67), pH adjustment agents, emulsifiers, propellants and thickeners (column 12, line 67 to column 13 line 16). The thickeners of Brode are cellulose derivatives (column 13, lines 11-13). The cellulose derivatives listed in column 13, lines 11-13 comprise of aldo-hexose sugars and thus meets the limitation of the claimed invention further comprising additional sugar that is a polysaccharide in claim 40. Regarding claim 29, it is noted that applicants' specification at page 7, line 20 defines the term "polymers" to include oligosaccharides. Heat step is involved in the preparation of Brode's compositions (Example 2). Brode meets the limitations of the designated claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15, 37, 38 and 41-44 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Brode et al. (US 4,913,743) in view of Raaf et al. (US 4,743,442).

Brode is discussed above. Brode discloses composition comprising glycosaminoglycans and cationic polymer. The preferred amount of the glycosaminoglycans in the composition ranges from 0.0005 wt% to about 2 wt% (column 8, line 61) as opposed to the 0.01 to 10% recited in claim 37 and the 2 wt% of Brode intersects a point in the recited range. The amount of the cationic polymer is 2.5 wt% in Run 40.3 to 40.9 and this weight percent is one of the points in the recited range of 0.01% to 10% in claims 14 and 15. Brode is silent on the presence of monosaccharides such as glucose in the composition. Raaf discloses a composition comprising glucose, alginate, polyvinylpyrrolidone and other components for use as skin care and skin protection composition (Example 8). Brode's composition is also used as a skin care composition, which is formulated in a number of forms such as lotion, cream, gel and sprays (column 11, line 33 to column 12 line 10). Thus, both compositions are used for the same general purpose. It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose....[T]he idea of combining them flows logically from their having

Art Unit: 1618

been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the composition of Brode. One having ordinary skill in the art would have been motivated to combine the two compositions of Brode and Raaf to make a third composition that would be used for the same purpose of skin care (see *In re Kerkhoven*).

(10) Response to Argument

Woodin Anticipates The Claimed Invention in Claims 1-8, 13-16, 20, 24-26, 29, 35 and 45-47

Appellants’ arguments filed 4/27/07 have been fully considered but they are not persuasive.

Appellant argues that a) the reliance on “laurdmonium hydroxyethylcellulose” meet claim 1 (b) is misplaced because US 5,962,015 to Delrieu, which was “previously cited by the Office, teaches that laurdmonium hydroxyethylcellulose is sold under the trademark CRODACEL QL, and that CRODACEL Q series of polymers all are quaternized cellulose polymers” (col. 4, line 64 to col. 5, line 38). Applicant concludes that since CRODACEL is a polysaccharide, it does not meet the requirements of the proviso in the claim 1.

That b) Woodin does not disclose combining glucosamine or galactosamine with a compound comprising at least two quaternary ammonium groups; that Woodin does not also teach “the formulation of ingredients in an amount effective to durably condition at least one keratinous fiber, as claimed.” That anticipation does not involve picking and

Art Unit: 1618

choosing and combining various disclosures according to “Arkley, 455 F.2d at 587, 172 USPQ at 526.”

Response:

Regarding a), Delrieu had not been cited as art in this application. However, Examiner agrees with applicant that CRODACEL is a polysaccharide according to Delrieu but the substituted amine group is not on the monosaccharide unit but is part of the hydroxyethyl cellulose unit and this cationic polymer specifically meets claim 1(a). Applicant's instant disclosure lists these types of cationic polymer as comprising at least two quaternary ammonium groups in paragraphs [0033] – [0039]; specifically paragraph [0036] of applicants published specification mentions these cationic polymers as being available from Croda. Furthermore, applicant's specification at paragraph [0036] lists polyquaternium 24 as a compound that comprises at least two quaternary ammonium groups. Thus, the CRODACEL or polyquaternium-11 (column 3, line 65 of Woodin) meet the limitation of “at least one compound at least two quaternary ammonium groups.”

Regarding b) Woodin contemplates using mixtures of cationic and nonionic resins (column 3, lines 44, 53 and 67) and copolymers of cationic polysaccharides and synthetic monomers and the these copolymers encompass glucosamine or galactosamine (column 4, lines 43, 44, 53-61). The amine groups in glucosamine and galactosamine are not substituted. Therefore, because, glucosamine and galactosamine do not have substituted amines, then the amine groups of Woodin's glucosamine and galactosamine are not substituted. “Effective to durably condition at least one keratinous fiber” is an intended use of the composition and the composition of the prior art is capable of performing the intended use. There is no picking and

Art Unit: 1618

choosing a composition disclosed as comprising copolymers of cationic polysaccharides and synthetic monomers that encompass those containing glucose, galactose, glucoseamine or galactosamine. While “Arkley, 455 F.2d at 587, 172 USPQ at 526” cited by appellant was not found, it is noted that because Woodin clearly directs the artisan to claim 1 as stated above, so that Woodin is in line with *In re Arkley, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972)* by clearly directing the skilled artisan to the composition of claim 1 by clearly disclosing the composition of claim 1 and not a combination of various disclosures to arrive at claim 1.

Brode Describes The Claimed Invention in Claims 1-9, 13, 16, 17, 20, 24-26, 29, 35, 39, 40 and 45-48

Appellant argues a) that Brode cannot anticipate the claims because “Brode broadly teaches the combination of glycosaminoglycan and cationic polymer,” that “those broad categories are not the claimed invention,” and that the use of the broad teaching of Brode represents picking and choosing and combining various disclosures. *In re Arkley, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972)*. b) that the aminoglycans are substituted amines and that Final Office action at page 9 notes that the specification does not explicitly define what a polysaccharide having a substitution on the amino group.

Response:

Regarding a), a combination of glycosaminoglycan and cationic polymer, though regarded by applicant as broad, is a teaching of claim 1 because Brode identifies the cationic polymer as polyquaternium (claim 10 of Brode), which meets claim 1 (a) and the glycosaminoglycans meet claim 1 (b). Appellant admits that Brode discloses a combination of

Art Unit: 1618

glycosaminoglycan and cationic polymer, although broad to appellant, is a confirmation that Brode teaches claim 1; a combination of glycosaminoglycan and cationic polymer is not a case of picking and choosing or combining various disclosures. Brode is in line with *In re Arkley*, 455 F.2d 586, 587, 172 USPQ524, 526 (CCPA 1972) by clearly directing the skilled artisan to the composition of claim 1 by clearly teaching the combination of glycosaminoglycan and cationic polymer. The statement on page 9 of the Final Office action, refers to the instant specification that does not contain a description of what a polysaccharide having a substitution on the amino group is. Thus regarding b), aminoglycans have amide functional groups, and amides are not substituted amines. Therefore, the glycosaminoglycans are not substituted amine.

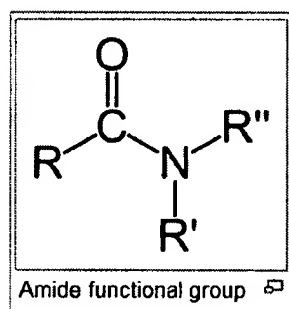
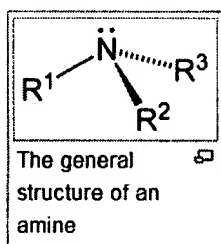
Brode In View of Raaf Renders claims 14, 15, 37, 38 and 41-44 Obvious

Appellants a) reiterate the position that the glycosaminoglycans have amino groups that are substituted, b) argue that Raaf does not also lead the ordinary skilled artisan to use “only glycosaminoglycans in which the amino groups are unsubstituted,” and therefore, Raaf does not remedy the defect in the teachings of Brode by suggesting inclusion of mineral salts in skin care compositions.

Response:

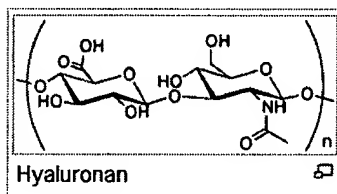
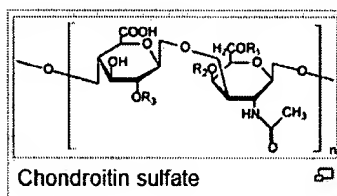
Amide and amines are different structurally, have different functional groups and have different properties. An amide is not an amine, and an amine is not an amide. Regarding a) glycosaminoglycans have amides and not amines and do not therefore contain substituted amines. Amine and amide functional groups are depicted below

Art Unit: 1618



Regarding b), Raaf is not relied upon for teaching glycosaminoglycans in which the amino groups are unsubstituted so that the artisan would be led to using glycosaminoglycan in which the amino groups may be unsubstituted. Raaf is rather relied upon for providing what is lacking in Brode as it relates to claim 41 and monosaccharides. Glycosaminoglycan contains an amide group and as admitted by appellant, chondroitin sulfate and hyaluronan are all glycosaminoglycans and the two compounds are depicted below as having amide functional groups and not amines;

Art Unit: 1618



so that the ordinary skilled artisan

would not expect glycosaminoglycans to have amine functional groups.

Obviousness-Type Double Patenting is withdrawn in view of the filling of a

Terminal Disclaimer on 4/27/07

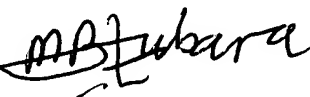
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

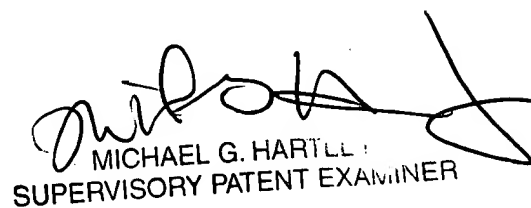
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Blessing Fubara (Examiner)



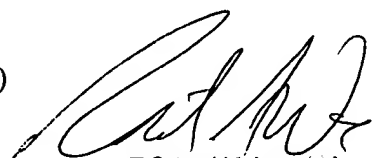
Michael Hartley (SPE)



MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER

Conferees:

Robert Wax (TQAS)



ROBERT A. WAX
PRIMARY EXAMINER
TC 1600 Appeals Specialist